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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/589,426

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Shigefumi Masuda

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11/18/2003

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EXAMINER

BELIVEAU, SCOTT E

ART UNIT

PAPER NUMBER

2614

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/589,426

Applicant(s)

MASUDA ET AL.

Examiner

Scott Beliveau

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 and 4-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-8 is/are allowed.
- 6) ☒ Claim(s) 2 and 4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings were received on 29 September 2003. These drawings are approved.

Response to Arguments

2. Applicant's arguments filed 29 September 2003 have been fully considered but they are not persuasive with respect to claims 2 and 4.
3. In consideration of claim 2 with respect to applicant's arguments, the examiner concurs that Sanders reference in Figure 3 illustrates the detection of a wave shape of an upstream signal in the time domain wherein the duration of pulses and intervals are compared. The language of claim 2, however, only requires that the "judging" is "based on a spectrum of the upstream signal". It is the examiner's opinion that the limitation is met wherein the "judging" is "based on a spectrum of the upstream signal" associated with the upstream signal band utilized by the modem (Col 2, Lines 54-58). Similarly, with respect to claim 4, the "judging" is "based on the ration of signal levels at predetermined frequencies" wherein the "predetermined frequencies" as those associated with the upstream signal band utilized by the modem (Col 2, Lines 54-58).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
6. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanders et al. (US Pat No. 5,893,024).

In consideration of claim 2, the Sanders et al. reference discloses an "ingress noise control system" [200] for use in a "cable system" [100] which utilizes different frequency bands for two-way communications (Col 1, Lines 23-27). The system includes an "ingress noise blocking device" [106] residing in the "transmission path" [108] comprising a "detection controller" [208] which is operable to turn on a "gate switch" [212] upon detection of a signal from the modem so as to "pass the upstream signal" (Col 3, Lines 18-37).

With respect to the limitation pertaining to the "synchronous detection controller", the reference does not explicitly make reference to the "detection controller" as a "synchronous detection controller", however it suggests that the "detection controller" is operable to identify a pattern or frequency of pulses matches that of a known modem (Col 4, Lines 6-15, 26-45). The reference further discloses that these pulses may comprise an initialization or synchronization sequence (Col 2, Lines 50-54). Accordingly, it would have been obvious to

one of ordinary skill in the art at the time of the invention to identify the transmission of a modem based on an identification of a particular “synchronization” sequence for the purpose of improving the means for distinguishing between upstream communication and noise exhibiting a particular frequency.

The system further includes a “configuration” [211] against which the “synchronous detection controller” [208] is operable to “judge” to determine if the “upstream signal is a valid upstream signal” based on the “spectrum of the upstream signal” (Figure 3). The “synchronous detection controller” [210] is subsequently operable to “turn on” or close the “gate switch” [212] (Col 4, Lines 10-15).

Claim 4 is rejected wherein the aforementioned “ingress noise blocking device” [106] comprises a “first” [216] and “second separation filter” [220] (Col 3, Lines 47-65), a “gate switch circuit” [211], and a “synchronous detection controller” [210] (see claim 1). The embodiment further comprises a “synchronous detection judging unit” [210] which based on the “ratio of signal levels at predetermined frequencies” (Figure 3) is operable to “judge” if the “upstream signal is a valid upstream signal” and if so, is subsequently operable to “turn on” or close the “gate switch” [212] (Col 4, Lines 10-15).

Allowable Subject Matter

7. Claims 5-8 are allowed.
8. The following is a statement of reasons for the indication of allowable subject matter:

The use of a “detector” in conjunction with a “gate switch circuit” is known in the art as evidenced, for example, by the Sanders et al. reference. Similarly, the use of “synchronous

detection circuits” including filters, delay circuits, is also known in the art as illustrated by the Kobayashi et al. reference. It is the examiner’s opinion that the art of record, however, is not necessarily conducive to an obvious design choice modifications to incorporate the aforementioned methods into a single embodiment as the applicant has suggested that the particular configuration wherein the “synchronous detection control” may be “configured as a differential detecting circuit which includes a delay circuit for delaying the upstream signal and a synchronous detector for multiplying the upstream signal with the signal delayed by the delay circuit” is for a particular purpose (Page 11, Lines 5-12) that each of the cited systems for blocking ingress noise using a “detector” and a “gate switch circuit” utilizes a means other than a “synchronous detector” further comprising the elements recited in claims 5-8. Subsequently, it would not have been necessarily obvious to one of ordinary skill in the art to modify the cited teachings, as they are operable utilizing a different type/form of detector, and there is no teaching in the cited art to suggest that the disclosed detectors may be readily substituted/combined using other detection means.

Accordingly, in consideration of claims 5 and 6, the art of record does not suggest nor discloses that the broadly construed “synchronous detection circuit” of the Sanders et al. reference further comprises a “differential detection circuit”. Furthermore, in consideration of claims 7-8, there is no suggestion or disclosure to suggest that the composition of the “synchronous detection controller” further comprises a “delay circuit”, a “synchronous detection circuit”, a “low-pass filter”, or a “synchronous detection judging unit”.

Conclusion

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as follows.

- The Baran et al. (US Pat No. 6,094,211) reference discloses an embodiment that is operable to facilitate the blocking of upstream noise during periods of upstream communications.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Beliveau whose telephone number is 703-305-4907.

The examiner can normally be reached on Monday-Friday from 8:00 a.m. - 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 703-305-4795. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-HELP.

SEB

November 12, 2003



JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600